# Part III:
# A Conversation with Phoenix Fire Leaders


*As noted above, the Phoenix Fire Department has completed a transition to trunked radio technology for all non-hazard zone responses. In 2010, it will assist more than 20 other Phoenix-area fire departments as they make the same transition.*

*The following conversation took place during a phone call on December 7 and an e-mail exchange the following day. The participants were:*

**IM Public Affairs Officer Ian Marquand*
**Division Chief Doug Mummert, PFD*
**Captain Jeff Schripesma, PFD*
*(PFD Captain Bill Mackey also contributed information for this section)*

**IM:** To start with, you have a big mutual aid system in the Phoenix area. Tell me about it.

**DOUG MUMMERT:** We have a regional fire response system. It's called "automatic aid" and it works just like mutual aid except that it's automatic. Any fire response is basically covered by the closest unit to the incident. It doesn't matter what jurisdiction they're from or what jurisdiction it's in. And that covers maybe 90% of the valley here. Twenty-one agencies participate in that.

We all need the same communication system and we've all been on the same communications system for quite some time. We all agreed in the beginning to use each other's radio frequencies on the VHF side to accomplish what we need to accomplish. So as those radio frequencies were absorbed into the system, we just kept doing that until we got to the 21-plus jurisdictions we are at today, which has served us well. It's a very robust VHF radio system.

**IM:** So how did trunking come about?

**MUMMERT:** Our trunked radio system--what we call the "Regional Wireless Cooperative"--in this area got started about ten years ago. When they were talking about getting a trunked cooperative together, they decided to go down that path for the fire partners. And then naturally, all of the police agencies, public works, public transportation and agencies of that nature regionally, fell into place as users on the trunked system.

So we were happily going down that road and we got to a point where we started doing some testing and looking at the ways we use the radio systems. We started to find out after a little bit of work that trunking wasn't going to be a safe thing for us. And the reason for that was there wasn't even close to a 100% chance we were going to be able to have communications on the fireground.

**IM:** What are your specific communications needs?

**MUMMERT:** We need a communications triangle. We need to be able to talk to each other, we need to be able to talk to command, which is usually outside the hazard zone, and we need to be able to talk to our dispatch center. So we need those three levels of communications and if we can't



complete all three of those pretty much 100% of the time, reliably, then that's not a safe communications system for us. So that's where the rub was against using the trunked radios originally.

**IM:** So what did you do about it?

**MUMMERT:** We put the transitioning over to the trunked system on hold. Then we hired a consultant (Buford Goff & Associates of South Carolina) to study it. They asked us what our requirements were and we told them. Then they went out and, from the information they could gather from us, our stakeholders, various vendors, and various other agencies, they basically came up with a plan for how we could use the trunked radio system. And for the hazard zone part of it, that was the DVRS (Digital Vehicle Repeater System) solution with additional requirements.

That was completed in May of 2007. In the meantime, we have this multi-million dollar radio system sitting here and we're waiting for development of hardware, basically, so we could institute a DVRS-augmented trunked radio system. They still haven't got that 100% complete as far as the hardware goes, but it's hopefully right around the corner.

In the meantime, we wanted to look at what else we could use the trunked system for. And so a labor-management committee got together and decided that actually, when you think about it, the trunked radio system would be great for "non-hazard zone" communications. Such as when we're rolling on a heart attack, car accident or whatever it might be, when people aren't physically located in harm's way at that moment.

**IM:** What made the difference?

**MUMMERT:** We figured out that you don't need the same kind of communications outside the "hazard zone" as you do inside it. So we started doing more testing and we figured out it would work for us on these EMS calls or non-hazard calls. So we developed a one-year plan that began in January 2009 to transition our "non-hazard zone" calls in the city of Phoenix over to the trunked radio system. For the last year, we've been going through the process, along with our stakeholders and partners.

On November 9th of this year, we began a battalion-by-battalion transition to the trunked radio system for "non-hazard zone" incidents. It's all the EMS calls except for those where you're likely to be wearing a SCBA—car accidents with fire, extrication or hazmat.

**IM:** What about rescue operations?

**MUMMERT:** We can use it for mountain rescues, tree rescues and water rescues. But on any technical rescue call where air ops are used, those are still done on simplex VHF. We can't have any sides of that triangle breaking down (in those situations.)

**IM:** So are you using two different radio systems now?

**MUMMERT:** We are. Just a couple of days ago (Saturday, Dec. 5) we finished up all of our battalions. Now in the city of Phoenix, all the EMS calls or "non-hazard calls" that aren't in exclusion zones will be on trunked radios. We still have the VHF radio system and the VHF radios, so actually, right this moment, we're dealing with two radios and two radio systems, along with our

partners. Because remember, if they're the closest unit to a call and if it's in the city of Phoenix then they'll be dispatched on a trunked radio as well. So they all have the capabilities and the training as well to respond.



**IM:** How is the transition going?

**MUMMERT:** The transition has gone very well actually. Part of it was because of the front-end loading we did on the planning, training and the marketing of it. The other reason is on the back end of it we put a huge support component in there 24-7 where we have the captains who are COML (Communications Unit Leader) trained available and ready to respond either in person or via whatever method they need to mitigate any issues that come up along the way. The issues for the most part have been ticky-tacky, mostly training-type things where someone didn't get the message or something along those lines

**IM:** So what's next?

**MUMMERT:** Where we're at right now is we're going to kind of ride this out for a little bit and take stock and feedback on how it's been going and make any adjustments along the way. Then, beginning the first week of January, we'll start systematically transitioning our partner cities over to the trunked radio system for the same types of calls. We'll do that as they're available and ready. Because they have to have the equipment, they have to have their emergency medical transport ready, and there are other political things (within the Phoenix "automatic aid" agreement) that they have to meet as well. That's going to take a little while because they each have their own issues.

**IM:** But you'll be able to mentor people through the transition process as things come up?

**MUMMERT:** Exactly.

**IM:** Now that you're starting to use the trunked system for non-hazard calls, what's your current position on using trunking in hazard zones?

**JEFF SCHRIPSEMA:** Our impression is still we do not think it's not safe in hazard zones and therefore we will not put our fire fighters in a hazard zone with a trunked radio.

**MUMMERT:** We don't believe in a regular trunked radio system without some kind of DVRS support.

**IM:** Is that a permanent position? Or are you still working toward finding a solution?

**MUMMERT:** We met last week and we came up with our plan for the next year. And basically over the next year, we are going to re-study where we're at, since it's been over two years since we've studied the requirements and solutions. I don't think our requirements have changed, but the solutions may have changed, and we're going to once again hire Buford Goff & Associates to re-look at everything we're doing and make sure we're where we need to be. They'll give us a matrix of what our solutions are, what the pros are, what the cons are, and what the costs are for each solution. And then we'll re-evaluate it and make an updated decision and move forward from there.

One of the things they could recommend, that they'll at least be looking at, is the multi-band radios that are out now. We have some Motorola APX portables that we're evaluating right now and that could be part of a solution for us. We could just narrowband our VHF and basically be done

with it or we could go down some other road. So we're really keeping an open mind and we're going to have them study the whole enchilada and give us the solutions and the recommendations.

**IM:** So just to be clear, you are taking another look at trunking for hazard zone communications.

**SCHRIPSEMA:** We're taking another look at what our best options are to keep simplex communications on the fireground. And now we've actually got a couple of NFPA (National Fire Protection Association) studies that have come out as well that are supporting our position. And we don't see our position changing on that. *(NOTE: The Los Angeles City Fire Department's Kevin Nida also has weighed in on the relative merits of conventional/analog radio vs. digital/trunking in an article published in the Nov./Dec. issue of the California Fire Service magazine.)*

**IM:** As I look at the Frequently Asked Questions section of your "800Mhz Trunked Radio Network" website, it states that you have "a solution that will render these radios safe to use in the hazard zone." That seems like a contradiction, since you currently don't support using trunked radios in hazard zones and you're not done studying the situation. Am I missing something?

**SCHRIPSEMA:** At the time we created the website, the only plan we really had in place was to implement a DVRS in our apparatus that would make the 800MHz safe to use in the hazard zone. That plan is still an option for us and will be considered. A lot has changed for us since then and we have other options we are looking at, including the dual band radio.

But we still have not ruled out using the 800MHz as an option in the hazard zone after we make the changes required to make it safe for our firefighters. The website is correct but does need to change to reflect the other possibilities we are looking at.

**IM:** In other words, you have a benchmark but you're not locked into any one solution?

**SCHRIPSEMA:** We do still have a plan to render the 800MHz radios safe in the hazard zone **if** (Jeff's emphasis) that is the best option for us. Over the next several months we will look closely at our hazard zone transition and begin to build what we decide is the best plan for us.

**IM:** Your original opposition to trunking and your 2004 report that criticized the performance of digital radios have been cited by some Montana fire departments as a rationale to oppose the digital-based interoperable/trunked radio system that's being built in our state. If you were to speak with Montana fire departments today, would your message be different?

**MUMMERT:** In no way are we against trunking. We do believe in it for non-hazard zone communications. The jury is still out as to if and how it may related to "hazard zone" use.

**SCHRIPSEMA:** What you're quoting is strictly when we were looking at it for all of our radio communications and not breaking it up as we have decided to do recently. There was no talk at that time about us using the trunked system for anything but hazard zones. And I don't think our position has changed any on hazard zones. It's not safe for hazard zone communications. Therefore we will not use it, at least for the foreseeable future, unless something changes, for hazard zone communications.

But that being said, it's still a tremendous tool that we can use to our advantage for all of these EMS calls that we have. And our personnel definitely are seeing value in that and so far are responding to it very favorably.

*(PFD Captain Bill Mackey also contributed information for this section.)*